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ON THE WOOD RAILS, GENUS ARAMIDES, OCCUR- RING NORTH OF PANAMA

OUTRAM BANGS

For many years I have been gathering all specimens I could of the splendid, great Wood Rails of the genus *Aramides* with the hope of some day monographing the group. Unfortunately I have as yet been unable to bring together sufficient material from South America to attempt to include in review the forms of that country. I now have, however, a complete set of the species and subspecies of Middle America from Panama north to the northern limit of the genus in southern Mexico. A critical study of this material together with a number of skins kindly lent me by the United States National Museum, the American Museum of Natural History, and the Bureau of Biological Survey of Washington, which include the types of *Aramides plumbeicollis* Zeledon, *A. axillaris* Lawr. and *A. albiventris* Lawr. has induced me to publish now a short synopsis of the forms of *Aramides* occurring north of Panama.

My views expressed in the following pages will be found to differ a little from those of recent authors, such as Sharpe in Vol. XXIII Catalogue of Birds in British Museum 1894 and *Biologia Centrali-Americana*, Aves, 3, 1897-1904, and I describe as new one form from Mexico, allowing to the region here treated three species and two additional subspecies.

In all species of *Aramides* the sexes are alike in color and there are but slight individual or seasonal differences, apart from those caused of the wholly mechanical processes of fading and wear. Some species have a juvenile plumage, still worn when the bird is nearly full grown, that is quite different in color from the livery of the adults — *A. axillaris* and its allies. Other species, apparently (I have seen but one young individual of *A. albiventris plumbeicollis*, and none at all of the other subspecies of *albiventris* or of *A. cajanea*) do not have a young plumage that is very distinctly different in color from that of the adults.

If the specimens examined by me are correctly sexed, there is also no average difference in size between the sexes in any of the species or subspecies. All, however, vary much in size individually, in fact to a degree I am wholly unable to account for.

KEY TO THE SPECIES AND SUBSPECIES OF ARAMIDES OCCUR-
RING NORTH OF PANAMA

A. Sexes alike in color.

1. Under wing-coverts banded black and white

A. axillaris Lawr.

1. Under wing-coverts banded black and cinnamon-rufous or
hazel 2.

2. Back of head, between gray forehead and gray neck not
distinctly chestnut, but grayish-brown or brownish-gray

A. cajanea (Müll.).

2. Back of head distinctly chestnut 3.

3. Back concolor, olive 4.

3. Back not concolor; olivaceous-tawny anteriorly, olive pos-
teriorly *A. albiventris plumbeicollis* (Zeledon).

4. General color paler; light colored crescent around the black
belly patch, very wide, white

A. albiventris albiventris Lawr.

4. General color darker; light colored crescent around the
black belly patch, narrow, fulvous

A. albiventris mexicanus nobis.

ARAMIDES AXILLARIS Lawrence

Aramides axillaris Lawr. Proc. Phil. Acad. p. 107, 1863. Sharpe Cat. Birds Br. Mus. 23, p. 56, 1894. Biol. Cent. Am., Aves vol. 3, p. 318, pl. LXXVII, 1897-1904.

TYPE LOCALITY. Barranquilla, Colombia. Type, now No. 45655, American Museum of Nat. Hist., New York, examined.

GEOGRAPHIC DISTRIBUTION. British Guiana, Trinidad, and northward through Venezuela and Colombia to southern Mexico.

It has been supposed that there was a break in the range of this species and that it did not occur in southern Central America south of Honduras. There is, however, in the Underwood collection, lately purchased by John E. Thayer Esq., a young example

of *A. axillaris*, nearly full grown but with the under parts still brownish slate-color, from Costa Rica. Unfortunately the label bears nothing more definite than "Costa Rica." While certainly very rare in southern Central America, I still believe *A. axillaris* has a continuous range. It is a rare species in northern South America, and seems to be nowhere so plentiful as in the region lying between southern Mexico and Honduras. At all events I can detect no difference between northern and southern specimens.

CHARACTERS. Size small; bill short; under wing-coverts banded blackish and white; neck and head, except throat, rufous-chestnut; a conspicuous gray patch occupying upper interscapular region and lower hind neck.

COLOR. Adult plumage. Throat white; head, neck and breast bright rufous-chestnut; upper interscapular region and lower hind neck gray (about slate gray); back, wing-coverts and wings except primaries and secondaries, olive; rump brownish black; tail and upper and under tail-coverts, black; belly and thighs slate-color; primaries hazel; secondaries also hazel but duller, more dusky toward tips; under wing coverts and axillars banded black and white; bend of wing and tips of axillars usually banded black and hazel; "tarsus vermilion; beak green, basal portion yellow; iris brown."¹

Young differ from adults in having the neck and under parts dull slate-color, and the characteristic gray patch on lower hind neck and upper back less distinct though still evident.

MEASUREMENTS.

No.	Sex & Age	Locality.	Wing.	Tail.	Tar- sus.	Cul- men.
45655 ²	Type —	Colombia, Barranquilla.	171.	60.	57.5	44.
6159 ³	♂ ad.	Colombia, Chirua.	166.	57.	57.	43.
167364 ⁴	♂ ad.	Yucatan, Mujeres Isl.	165.	58.	54.	41.
141535	♂ ad.	Mexico, Guerezo, Acapulco.	168.	54.	56.	43.
157363	♂ ad.	Mexico, Tepic, San Blas.	169.	60.	60.	45.
50871 ⁵	♂ yg. ad.	" " "	166.	—	57.	42.5
52844	—	Mexico, Mazatlan.	170.	58.5	54.5	42.5

¹ From notes made from fresh specimen by W. W. Brown Jr.

² Coll. of American Museum of Nat. Hist., New York.

³ Coll. of E. A. & O. Bangs, Boston.

⁴ Coll. of Bureau of Biological Survey, Washington.

⁵ Coll. of U. S. National Museum, Washington.

No.	Sex & Age	Locality.	Wing.	Tail.	Tar- sus.	Cul- men.
105554	yg.	British Guiana.	168.	53.	51.	39.
16375 ¹	yg.	Costa Rica.	156.	50.	51.	40.5

REMARKS. *A. axillaris* is a small species with a short bill, related to *A. mangle* (Spix) of Brazil of which it is the northern representative. Judged by the few specimens I have been able to examine I should think the two were specifically distinct.

A. axillaris is very different from any species occurring in the same region with it, being at once distinguished by its small size, black and white under wing-coverts and red-brown neck. It does not appear to be subject to any geographic variation — southern and northern examples being, so far as I can see, quite alike.

ARAMIDES CAJANEA (Müller).

Fulica cajanea Müll., Syst. Nat. Suppl., p. 119, 1776, based on Daubent. Pl. Eul. pl. 352.

Rallus chiricote Vieill., N. Dict. d' Hist. Nat., 28, p. 551, 1789.

Aramides cayanea Sharpe, Cat. Birds Br. Mus. Vol. 23, pp. 57-58, 1894.

Aramides cayanea subsp. *A. Aramides chiricote* Sharpe, Cat. Birds Br. Mus. Vol. 23, pp. 58-59, 1894.

Aramides chiricote Biol. Cent. Am. Aves, Vol. 3, p. 318, 1897-1904.

TYPE LOCALITY: Cayenne.

Geographic Distribution: Tropical America in general from northern Brazil north through Panama and Chiriqui to the Pacific slope of Costa Rica.

CHARACTERS: Size large (in point of size *A. cajanea* and its allies occupy an intermediate position in the genus, being much larger than *A. axillaris* and allied species, but inferior to the gigantic *A. ypacaha* (Vieill.) of southern South America); bill long; under wing-coverts banded blackish and hazel; neck and head gray, duller, browner on occiput; back concolor, olive; breast, concolor bright, deep, reddish tawny.

COLOR: Throat dull grayish white; rest of head and neck gray (nearest slate-gray) this color sometimes extending a little

¹ Coll. of E. A. & O. Bangs, Boston.

onto mantle, darkest on forehead and palest on cheeks, the occiput darker, duller, often brownish — grayish-brown, brownish-gray or grayish-olive; back and wings, except primaries and secondaries greenish-olive; primaries and secondaries hazel, darker, dusky olive toward tips, the outer secondaries olive on outer edges, and inner secondaries mostly olive; rump black, often suffused posteriorly with deep reddish olive; upper tail coverts and tail black; breast deep reddish tawny, varying slightly in tone (with season or age?), sometimes toward hazel sometimes toward orange-rufous; belly and under tail coverts black; thighs slate color; under wing coverts and axillars banded black and hazel; "tarsus poppy-red; terminal part of bill green, basal part yellow; obital ring red; iris red, *soon after death changing to brown.*"¹

MEASUREMENTS.

No.	Sex & Age.	Locality.	Wing.	Tail.	Tar- sus.	Cul- men.
11398 ²	—	Brazil, Santarem	180.	56.5	69.	51.
121110 ³	♀ ad.	Brazil, Diamantina	172.	64.	68.5	50.
15408	—	Brazil.	168.	58.	68.	52.5
16536	—	"	185.	70.	68.	57.
9942 ²	♀ ad.	Surinam, Paramaribo.	176.	61.	70.	57.
9943	♀ ad.	" "	168.	58.	68.	52.
17940 ³	—	Darien, Atrata.	177.	—	69.	—
148191	—	Panama.	175.	63.	71.	52.
7060 ²	♂ ad.	Panama, Loma del Leon.	173.	65.	69.	55.
7650	♀ ad.	Chiriqui, Divala.	177.	60.	72.	53.5
7649	♂ ad.	" "	185.	61.	71.	56.5
40386 ³	—	Chiriqui, David.	176.	60.	65.	54.
40392	—	" "	172.	66.	72.	55.5
132265	♂ ad.	Costa Rica.	190.	65.	71.	54.
64997	—	Costa Rica, Talamanca Dist.	182.	66.	68.	57.
64998	—	" "	184.	58.	72.	54.
67900	—	" "	175.	57.	69.	54.5
67905	—	" "	189.	54.	69.	50.5
16373 ²	♀ ad.	Costa Rica, Pozo Azul.	184.	59.	71.	53.5
16374	♂ ad.	" "	180.	63.	72.	57.
14297	♀ ad.	Panama, San Miguel Isl.	163.	58.5	67.5	52.
14298	♀ ad.	" "	170.	64.	66.	52.
14299	♂ ad.	" "	165.	59.	67.	52.
40343 ⁴	♂ ad.	" "	169.	—	67.	53.

¹ Notes made from freshly killed examples by W. W. Brown, Jr.

² Coll. of E. A. and O. Bangs.

³ Coll. of United States National Museum.

⁴ Coll. of Museum of Comparative Zoology.

REMARKS. After very careful comparison of a large number of specimens I fail altogether to make out a subspecies, *chiricote*. I can find no constant differences whatever between skins from Brazil and Surinam on the one hand and the most northern examples from Chiriqui and Costa Rica on the other. Indeed Sharpe in Catalogue of Birds in the British Museum (Vol. 23, pp. 57-59) does not assign any well defined geographic distribution to the two subspecies he recognizes. The patch of a duller color on the occiput varies considerably in shade — with season I think, that is with the condition of the plumage, whether fresh or much worn. Different examples from Panama and Costa Rica differ quite as much in respect to the shade of color and distinctness of this marking as do any two that can be picked out from the northern and southern parts of the range of the species.

Inhabiting the Pearl Islands in the Bay of Panama is a slightly paler and slightly smaller race of this rail. The four examples taken there by Mr. Brown cannot quite be matched by continental specimens, but the differences are too slight and in this genus of two unimportant a nature to base a subspecies upon.

There appears, however, to be in Brazil a well marked subspecies, the exact range of which I am through want of sufficient material unable to define. Skin "f" of Sharpe's list in Catalogue of Birds, belongs to this form (see footnote, p. 58) and there is one skin in the National Museum, No. 24124 from (St. Catharines ?) Brazil collected by Lemuel Wells, that appears to agree exactly with Sharpe's Rio de Boraxudo specimen, differing from *A. cajaneae* in being mostly gray above, the gray of the upper neck pervading the entire mantle, the wing coverts alone being olive and these paler and decidedly more grayish olive than in *A. cajaneae*; the rufous color of under parts, as pointed out by Sharpe in his specimen too, is also paler. This bird is not *Gallinula ruficeps* Spix, which, judged by the plate, is true *A. cajaneae*, and undoubtedly represents a valid form.

Another peculiar individual is a very old skin in the National Museum, no. 15407, labeled "Buenos Ayres, J. K. Townsend ♂." In color this example agrees with true *A. cajaneae* except in having the rump nearly wholly dark reddish olive. It is, however, very much larger with proportionally shorter tarsus and bill, the wings,

considerably worn at that, measuring, 200, tail 86, tarsus 73, culmen 55. It may represent still another subspecies.

Thus while in the northern part of its range from northern Brazil north, this rail does not vary to any extent with geographic areas, there seem to be in southern South America several geographic forms.

Aramides cajanea is another very distinct species, nearly allied only to *A. albiventris* Lawr. From that bird it can always be distinguished by its shorter, thicker bill, and duller color of the occipital region, which in *A. albiventris* is always bright chestnut.

ARAMIDES ALBIVENTRIS ALBIVENTRIS Lawr.

Aramides albiventris Lawr. Proc. Phila. Acad., p. 234, 1867.

Aramides cayanea, subsp. B. *Aramides albiventris* Sharpe, Cat. Birds. Br. Mus. Vol. 23, 1894, pp. 59-60.

Aramides albiventris Biol. Cent. Am., Aves, Vol. 3, p. 319, 1897-1904.

TYPE LOCALITY: British Honduras, Type, now 45656, American Museum of Natural History, examined.

GEOGRAPHIC DISTRIBUTION: British Honduras and Yucatan, and parts of Guatemala. Exact limits of range not known.

CHARACTERS: About the size of *A. cajanea* or slightly larger; bill longer and more slender than in that species; all the colors pale; a large, conspicuous patch of bright chestnut extending from between eyes over occiput to upper surface of neck; white throat patch large, extending well down neck; black of belly surrounded by a wide crescent shaped marking of white; under wing coverts banded black and pale hazel.

COLOR: Throat dull white, this color extending well down under surface of neck; on the occiput, extending backward to upper neck and forward to between eyes, a conspicuous patch of chestnut; rest of neck and head gray (about Gray No. 6 of Ridgway); back pale greenish olive; scapulars and sometimes outer interscapulars as well ochraceous-rufous more or less mixed with olive, this marking usually very conspicuous, though never forming a complete mantle across back as in the southern subspecies *plumbeicollis*; primaries and secondaries, light, bright hazel;

rump black, somewhat dusky olive anteriorly; upper tail coverts and tail black; breast pale tawny-ochraceous becoming ochraceous-buff posteriorly; a wide crescent shaped marking of white or sometimes cream-buff, around upper part of black belly patch; belly and under tail coverts black; thighs slate color; under wing coverts and axillars banded black and pale hazel, the tips of the feathers sometimes buff.

MEASUREMENTS

No.	Sex & Age.	Locality.	Wing.	Tail.	Tarsus.	Culmen.
45656 ¹	Type	British Honduras.	186.	62.5	80.	63.5
— ²	—	Belize, British Honduras.	180.	65.	74.5	60.
130325	—	Yucatan	176.	57.	74.	60.5
130326	—	"	177.	59.	76.	64.
130327	—	"	177.	58.	80.	65.
148192	—	"	184.	62.	77.	—
15246 ³	♂ ad.	Yucatan, Rio Lagartos	177.	63.5	74.	62.5
33668 ²	—	Guatemala, Chiapam	187.	62.	78.	66.
42777	—	Central Guatemala	176.	58.	75.5	66.

REMARKS. Typical *A. albiventris* occurs only, so far as I know, in the coast region of British Honduras and Yucatan, and in its very pale coloration parallels other bird forms of the same region such as the clapper rail, lately named *Rallus pallidus* by Nelson.

Two specimens from Guatemala I refer here, though they are intermediates, between *A. albiventris albiventris* and *A. albiventris mexicanus*, the one from central Guatemala being nearer to Yucatan and British Honduras examples, the other from Chiapam on the Pacific coast being more like the Mexican bird. To the northward true *A. albiventris* is replaced by a darker form with less distinct and more fulvous crescentic marking on the belly, that occupies southern Mexico and that I have named below as a new subspecies. Farther south in Central America *A. albiventris* is represented by a form — *A. plumbeicollis* — quite different in some details of coloration, and somewhat smaller, but still so like it in general that I have no hesitation in regarding the southern form as a subspecies rather than a segregate species.

¹ Coll. American Museum of Natural History.

² Coll. United States National Museum.

³ Coll. E. A. and O. Bangs.

I find no indication of intergradation between *A. cajanea* and *A. albiventris* and must regard them as distinct species. The much longer more slender bill of *A. albiventris* and the conspicuous chestnut patch on the back of the head, always serve to distinguish it in all its subspecies from *A. cajanea*.

ARAMIDES ALBIVENTRIS MEXICANUS sub. sp. nov.

TYPE: from Buena Vista, Vera Cruz, Mexico, adult ♀, no. 2281 Coll. of E. A. and O. Bangs. Collected June 4, 1901, by A. E. Colburn and P. W. Shufeldt.

GEOGRAPHIC DISTRIBUTION: Southern Mexico, in States of Vera Cruz, Tabasco, Oaxaca and Chiapas, north to Hidalgo (one skin from Orizava no. 29231, U. S. Nat. Mus.) and on the coast at least to Tampico.

CHARACTERS: Very similar to true *A. albiventris*, but pale crescentic marking on belly, surrounding black belly patch much narrower and less distinct, strong buff in color, not white or cream buff; all the colors darker — gray of head and neck, greenish olive of back, and tawny of breast; much less suffused with ochraceous or tawny on scapulars and outer interscapulars though this marking is often indicated; throat less purely white, more grayish and this marking more confined, extending less onto under surface of neck.

MEASUREMENTS

No.	Sex & Age.	Locality.	Wing.	Tail.	Tarsus.	Culmen.
2281 ¹	Type ♀ ad.	Mexico, Vera Cruz, Buena Vista.	177.	54.	74.	64.
2280	♂ ad.	" " "	180.	56.5	76.	63.
141536 ²	♀ ad.	Mexico, Vera Cruz, Tlacotalpam.	179.	59.	74.	63.
141537	♂ ad.	" " "	185.	59.	73.	61.
141539	♀ ad.	" " "	173.	58.	77.	64.
58966 ³	—	Isthmus of Tehuantepec.	189.	60.	83.	73.
76990	—	"	185.	67.	78.	66.
29231	—	Mexico, Hidalgo, Orizava.	188.	64.	79.	67.
141541 ²	♀ ad.	Mexico, Oaxaca, Guichicovi.	182.	58.	73.	61.5
11012 ¹	♀ ad.	Mexico, Tabasco	164.	60.	70.	62.
11013	♂ ad.	" "	184.	62.	80.	66.

¹ Coll. of E. A. and O. Bangs.

² Coll. of Bureau of Biological Survey, Washington.

³ Coll. of U. S. National Museum.

REMARKS: *Aramides albiventris mexicanus* is the northern representative of this group of the genus, occupying the southern tier of states of the Republic of Mexico and southeastward passing gradually into true *A. albiventris* of Yucatan and British Honduras. Though well characterized subspecifically it is in general much like true *A. albiventris*. It can, however, always be told from that form by the characters pointed out above.

ARAMIDES ALBIVENTRIS PLUMBEICOLLIS (Zeledon)

Aramides plumbeicollis Zeledon Anales. Mus. Nac. Costa Rica, 1, p. 131, 1887. Biol. Cent. Am. Aves, Vol. 3, p. 320, 1897-1904.

TYPE LOCALITY: Jiménez, Costa Rica. Type now no. 113603, U. S. National Museum, examined.

GEOGRAPHIC DISTRIBUTION: Costa Rica, specimens examined from Jiménez, Carrillo, and Cariblanco de Sarapiquí, north at least to Segovia River, Honduras.

CHARACTERS: Similar to *A. albiventris mexicanus*, but slightly smaller; bill actually shorter, though relatively of about the same length; differing in color principally in having a complete mantle across upper back of olivaceous-tawny — the back thus bicolor, olivaceous — tawny anteriorly, greenish olive posteriorly; breast rather darker than in the other two subspecies more nearly as in *A. cajanea*; crescentic marking made by paler feathers around black belly patch, when present, narrow and buff in color (in two skins, one from Carrillo and one from Cariblanco de Sarapiquí this marking shows very distinctly; in the type and one other skin from type locality it is barely indicated).

MEASUREMENTS.

No.	Sex & Age.	Locality.	Wing.	Tail.	Tarsus.	Culmen.
113603 ¹	♂ ad.	Type Costa Rica, Jiménez	173.	51.	74.	57.
115045	♀ ad.	" "	170.	53.	75.	—
16371 ²	♀ ad.	Costa Rica, Cariblanco de Sarapiquí.	172.	50.	75.	58.
16372	♀ ad.	Costa Rica, Carrillo.	175.	56.5	73.	61.
112254 ¹	♂ yg.	Honduras, Segovia River.	173.5	58.	75.	53.

¹ Coll. of United States National Museum.

² Coll. of E. A. and O. Bangs.

REMARKS: I feel confident that I am right in placing this bird among the subspecies of *A. albiventris*, rather than to allow it specific rank. In all essential points — the long slender bill and chestnut color of the occiput and crown it agrees with *A. albiventris albiventris* and *A. albiventris mexicanus*. The brown mantle strikes one at first as a very strong point of difference, but this is in reality only a difference of degree, many northern skins showing a very decided approach to it, though it is in them never quite complete all across the back as it invariably is in the Costa Rican bird. The southern form is also somewhat smaller and darker in color below than either of the other two races, but every indication, in my opinion, points to its being a representative geographic form — subspecies — of the *A. albiventris* type.

The specimen from Segovia River, Honduras, unquestionably belongs here, as first pointed out by Richmond (Proc. U. S. Nat. Mus. 16, p. 528, 1894). It is young, and as it happens is the only young example of any of these rails, except *A. axillaris*, that I have seen. The feathers of the underparts; especially the belly, are more fluffy than in the adults and in color it differs in the belly (black in the adult plumage) being black only at the base of the feathers which are externally tipped and suffused with the tawny color of the breast and in the rump, also clothed in fluffy feathers, being decidedly paler and browner. Though badly shot in the back and neck with many feathers from these parts lacking, the complete mantle of olivaceous-tawny is plainly to be seen. The bill is not full grown and is very immature in appearance. Judging from this skin it appears that the species of *Aramides* of this group do not have a brownish gray breasted juvenile plumage as does *A. axillaris* and its allies.